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QINGHONG CAO

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07/08/2010

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EXAMINER

LY, NGHI H

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/447,284	Applicant(s) CAO ET AL.	
	Examiner NGHI H. LY	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04/22/2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,9,10,19,20 and 30-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,9,10,19,20 and 30-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 2, 4, 5 and 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borland et al (US 6,556,965) in view of Young, III (US 5,694,467).

Regarding claim 1, Boland teaches a cordless telephone (see Abstract, see “cordless telephone”), comprising: a remote handset (see fig.2, handset 110), a base unit matched to the remote handset (see fig.2, base station 120), and an MPEG audio integrated within at least one of the remote handset and the base unit (see Abstract, column 5, lines 37-40, column 4, lines 7-21, see “MP3”, and column 4, lines 48-66, see

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“MPEG” and see “MP3”, also see column 3, line 65 to column 4, line 7, see “MPEG” and see column 5, lines 24-28).

Borland does not specifically disclose a summer adapted to digitally sum a digitally synthesized ring tone with an audio bit stream to allow a user of the telephone to hear the telephone ringing along with music.

Young teaches a summer adapted to digitally sum a digitally synthesized ring tone with an audio bit stream to allow a user of said cordless telephone to hear said cordless telephone ringing along with music (see column 3, lines 18-21, column 4, lines 27-34, see “*the present invention would operate identically with digital or other type telephones*”, also see Abstract and column 2, lines 9-24, see “*a user headset is connected to a mixer with audio input from a Music Source, a mic detecting ambient noise, and a ring tone from the phone*”, see column 4, lines 24-30, see “***so they can hear the telephone ring while listen to music***”, also see column 5, lines 50-60, see “***a cordless***”. In addition, column 3, lines 18-19, further teaches that “Phone 10 is a standard analog or digital telephone” and column 5, lines 31-34, further teaches that “the present invention would operate identically with digital or other type telephone”. Since the digital telephone 10 of Young is digital, the mixer 22 also a digital mixer, and it reads on applicant’s “digital summing”).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Young into the system of Borland in order to improve in sound headset systems and telephone headset systems (see Young, column 1, lines 7-9).

Regarding claim 2, Borland teaches the MPEG audio player is integrated within the remote handset (see Borland, column 5, lines 24-28).

Regarding claims 4 and 5, Borland teaches the MPEG audio player is an MP3 (see Borland, Abstract, "MP3", column 4, lines 7-21, "MP3").

Regarding claims 30 and 31, the combination of Borland and Young further teaches the base unit is adapted (i) to receive from a telephone line a telephone audio signal representing a telephone conversation and (ii) to transmit the telephone audio signal to said remote handset (see Borland, column 5, lines 24-28 and column 4, lines 27-33, see "storage in portable systems" and column 4, lines 43-47, see "playback"), the telephone conversation with the MPEG audio bit stream (see Borland, Abstract, column 5, lines 37-40, column 4, lines 7-21, see "MP3", and column 4, lines 48-66, see "MPEG" and see "MP3", also see column 3, line 65 to column 4, line 7, see "MPEG" and see column 5, lines 24-28) and said summer is further adapted to digitally sum the telephone audio signal representing the telephone conversation with the audio bit stream (see Young, see column 3, lines 18-21, column 4, lines 27-34, see "*the present invention would operate identically with digital or other type telephones*", also see Abstract and column 2, lines 9-24, see "*a user headset is connected to a mixer with audio input from a Music Source, a mic detecting ambient noise, and a ring tone from the phone*", see column 4, lines 24-30, see "***so they can hear the telephone ring while listen to music***", also see column 5, lines 50-60, see "***a cordless***").

Regarding claim 32, the combination of Borland and Young further teaches both said MPEG audio player (see Borland, Abstract, column 5, lines 37-40, column 4, lines

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7-21, see “MP3”, and column 4, lines 48-66, see “MPEG” and see “MP3”, also see column 3, line 65 to column 4, line 7, see “MPEG” and see column 5, lines 24-28), the digitally synthesized ring tone with the MPEG audio bit stream (see Borland, Abstract, column 5, lines 37-40, column 4, lines 7-21, see “MP3”, and column 4, lines 48-66, see “MPEG” and see “MP3”, also see column 3, line 65 to column 4, line 7, see “MPEG” and see column 5, lines 24-28), and said summer are jointly implemented as a single digital signal processor adapted to digitally sum the digitally synthesized ring tone with the audio bit stream (see Young, see column 3, lines 18-21, column 4, lines 27-34, see “*the present invention would operate identically with digital or other type telephones*”, also see Abstract and column 2, lines 9-24, see “*a user headset is connected to a mixer with audio input from a Music Source, a mic detecting ambient noise, and a ring tone from the phone*”, see column 4, lines 24-30, see “***so they can hear the telephone ring while listen to music***”, also see column 5, lines 50-60, see “***a cordless***”).

Regarding claim 33, the combination of Borland and Young further teaches both said MPEG audio player (see Borland, Abstract, column 5, lines 37-40, column 4, lines 7-21, see “MP3”, and column 4, lines 48-66, see “MPEG” and see “MP3”, also see column 3, line 65 to column 4, line 7, see “MPEG” and see column 5, lines 24-28), the digitally synthesized ring tone with the MPEG audio bit stream (see Borland, Abstract, column 5, lines 37-40, column 4, lines 7-21, see “MP3”, and column 4, lines 48-66, see “MPEG” and see “MP3”, also see column 3, line 65 to column 4, line 7, see “MPEG” and see column 5, lines 24-28), and said summer are jointly implemented as a single digital signal processor adapted to digitally sum the digitally synthesized ring tone with the

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audio bit stream (see Young, see column 3, lines 18-21, column 4, lines 27-34, see “*the present invention would operate identically with digital or other type telephones*”, also see Abstract and column 2, lines 9-24, see “*a user headset is connected to a mixer with audio input from a Music Source, a mic detecting ambient noise, and a ring tone from the phone*”, see column 4, lines 24-30, see “***so they can hear the telephone ring while listen to music***”, also see column 5, lines 50-60, see “***a cordless***”).

Regarding claim 34, Boland further teaches the cordless telephone further comprises: a digital-to-analog converter connected to said digital signal processor to receive the digital summed audio signal and to produce an analog audio signal suitable for outputting to the user (see Abstract and column 2, lines 56-61, see “digital-to-analog (D/A)).

4. Claims 9, 10, 19, 20 and 35-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borland et al (US 6,556,965) in view of Young, III (US 5,694,467) and further in view of Tuoriniemi et al (US 5,978,689).

Regarding claims 9 and 19, Borland teaches a method of integrating an MPEG audio player in a cordless telephone, comprising: connecting a base unit of said cordless telephone to a public switched telephone network (PSTN) (see fig.2, cable 122, indeed to PSTN), playing pre-loaded MP3 music from a remote handset of said cordless telephone (see column 5, lines 24-28 and column 4, lines 27-33, see “storage in portable systems” and column 4, lines 43-47, see “playback”).

Borland does not specifically disclose digitally summing a digitally synthesized ring tone with an audio bit stream to allow a user of the telephone to hear the telephone ringing along with music.

Young teaches a summer adapted to digitally sum a digitally synthesized ring tone with an audio bit stream to allow a user of said cordless telephone to hear said cordless telephone ringing along with music (see column 3, lines 18-21, column 4, lines 27-34, see *“the present invention would operate identically with digital or other type telephones”*, also see Abstract and column 2, lines 9-24, see *“a user headset is connected to a mixer with audio input from a Music Source, a mic detecting ambient noise, and a ring tone from the phone”*, see column 4, lines 24-30, see ***“so they can hear the telephone ring while listen to music”***, also see column 5, lines 50-60, see ***“a cordless”***. In addition, column 3, lines 18-19, further teaches that “Phone 10 is a standard analog or **digital** telephone” and column 5, lines 31-34, further teaches that “the present invention would operate identically with **digital** or other type telephone”. Since the **digital** telephone 10 of Young is digital, the mixer 22 also a digital mixer, and it reads on applicant’s “digital summing”).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Young into the system of Borland in order to improve in sound headset systems and telephone headset systems (see Young, column 1, lines 7-9).

The combination of Borland and Young does not specifically disclose muting the playing of the pre-loaded music when the remote handset is active in a current telephone call.

Tuoriniemi teaches muting the playing of the pre-loaded music (see column 9, lines 17-20) when the remote handset is active in a current telephone call (see column 7, lines 49-55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Tuoriniemi into the system of Borland and Young so that the user won't miss the telephone call while enjoy listening to music.

Regarding claims 10 and 20, the combination of Borland, Young and Tuoriniemi further teaches muting pauses the playing of the pre-loaded music (see Tuoriniemi, column 9, lines 17-20).

Regarding claim 35, the combination of Borland and Young further teaches the base unit receiving from the PSTN a telephone audio signal representing a conversation (see Borland, Abstract and fig.2 and the line 122 of base unit of cordless telephone of Borland inherently connect to a public switch telephone network), the base unit transmitting the telephone audio signal to the remote handset, the telephone conversation with the MPEG audio bit stream (see Borland, Abstract, column 5, lines 37-40, column 4, lines 7-21, see "MP3", and column 4, lines 48-66, see "MPEG" and see "MP3", also see column 3, line 65 to column 4, line 7, see "MPEG" and see column 5, lines 24-28), and the remote handset digitally summing the telephone audio signal

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representing the telephone conversation with the audio bit stream (see Young, see column 3, lines 18-21, column 4, lines 27-34, see “*the present invention would operate identically with digital or other type telephones*”, also see Abstract and column 2, lines 9-24, see “*a user headset is connected to a mixer with audio input from a Music Source, a mic detecting ambient noise, and a ring tone from the phone*”, see column 4, lines 24-30, see “***so they can hear the telephone ring while listen to music***”, also see column 5, lines 50-60, see “***a cordless***”).

Regarding claim 36, the combination of Borland, Young and Tuoriniemi further teaches the telephone audio signal is monaural, and the MPEG audio bit stream has a plurality of stereo channels (see Borland, column 5, lines 24-28 and column 4, lines 27-33, see “storage in portable systems” and column 4, lines 43-47, see “playback”), and the step of the telephone audio signal with the MPEG audio bit stream comprises the monaural telephone audio signal into each of the plurality of stereo channels of the MPEG audio bit stream (see Borland, Abstract, column 5, lines 37-40, column 4, lines 7-21, see “MP3”, and column 4, lines 48-66, see “MPEG” and see “MP3”, also see column 3, line 65 to column 4, line 7, see “MPEG” and see column 5, lines 24-28), the step of digitally summing the telephone audio signal with the audio bit stream comprises digitally summing the monaural telephone audio signal into each of the plurality of stereo channels of the audio bit stream (see Tuoriniemi, column 6, lines 39-43, see “*listen to an audio program while being able to hear telephone audio ring signals...*”), such that a sense of balance in the user is improved (see Tuoriniemi, column 6, lines

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39-43, see *"listen to an audio program while being able to hear telephone audio ring signals...."*).

Regarding claim 37, the combination of Borland, Young and Tuoriniemi further teaches the steps of (i) playing pre-loaded MP3 music from the remote handset of said cordless telephone (see Borland, column 5, lines 24-28 and column 4, lines 27-33, see "storage in portable systems" and column 4, lines 43-47, see "playback"), the telephone audio signal with the MPEG audio bit stream (see Borland, Abstract, column 5, lines 37-40, column 4, lines 7-21, see "MP3", and column 4, lines 48-66, see "MPEG" and see "MP3", also see column 3, line 65 to column 4, line 7, see "MPEG" and see column 5, lines 24-28), and (ii) digitally summing the telephone audio signal with the audio bit stream are performed by a single digital signal processor (see Tuoriniemi, column 6, lines 39-43, see *"listen to an audio program while being able to hear telephone audio ring signals...."*).

Regarding claim 38, the combination of Borland, Young and Tuoriniemi further teaches both said MPEG audio player (see Borland, Abstract, column 5, lines 37-40, column 4, lines 7-21, see "MP3", and column 4, lines 48-66, see "MPEG" and see "MP3", also see column 3, line 65 to column 4, line 7, see "MPEG" and see column 5, lines 24-28), the digitally synthesized ring tone with the MPEG audio bit stream (see Borland, Abstract, column 5, lines 37-40, column 4, lines 7-21, see "MP3", and column 4, lines 48-66, see "MPEG" and see "MP3", also see column 3, line 65 to column 4, line 7, see "MPEG" and see column 5, lines 24-28), and said summer are jointly implemented as a single digital signal processor adapted to digitally sum the digitally

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synthesized ring tone with the audio bit stream (see Young, see column 3, lines 18-21, column 4, lines 27-34, see *“the present invention would operate identically with digital or other type telephones”*, also see Abstract and column 2, lines 9-24, see *“a user headset is connected to a mixer with audio input from a Music Source, a mic detecting ambient noise, and a ring tone from the phone”*, see column 4, lines 24-30, see ***“so they can hear the telephone ring while listen to music”***, also see column 5, lines 50-60, see *“a cordless”*).

Regarding claim 39, Boland further teaches digital-to-analog converting the digital summed audio signal to produce an analog audio signal suitable for outputting to the user (see Abstract and column 2, lines 56-61, see “digital-to-analog (D/A)).

Response to Arguments

5. Applicant's arguments with respect to claims 1, 2, 4, 5, 9, 10, 19, 20 and 30-39 have been considered but are moot in view of the new ground(s) of rejection.

The examiner believes Young, III (US 5,694,467) indeed teaches applicant's claimed limitations. Therefore, the response below based on the Applicant's remarks (filed 02/04/2010), not the Applicant's remarks (filed 04/22/2010).

On page 4 of applicant's remarks (filed 02/04/2010), applicant argues that Young provides no teaching or suggestion whatsoever that the signals input to mixer 22 may be digital signals, or that mixer 22 may be a digital mixer. As such, Young fails to teach or even suggest either digital summing or a digitally synthesized ring tone.

In response, Young, column 3, lines 18-19, teaches that “Phone 10 is a standard analog or **digital** telephone” and column 5, lines 31-34, further teaches that “the present invention would operate identically with **digital** or other type telephone”. Since the **digital** telephone 10 of Young is digital, the mixer 22 also a digital mixer, and it reads on applicant’s “digital summing”. Therefore, Young does indeed teach applicant’s claimed limitations.

On page 5 of applicant's remarks (filed 02/04/2010), applicant argues that Young have no relevance whatsoever to summing a telephone audio signal representing the telephone conversation with an audio stream.

The examiner, however, disagrees. Fig.1 and fig.2 of Young clearly indicates that the mixer 22 mixing (or summing) the input 26 phone line with the music feed 16. Therefore, Young indeed teaches summing a telephone audio signal representing the telephone conversation with an audio stream.

On page 6 of applicant's remarks (filed 02/04/2010), applicant argues that Young teaches nothing whatsoever regarding a digital-to-analog converter.

In response, Boland indeed teaches a digital-to-analog converter (see Abstract and column 2, lines 56-61, see “digital-to-analog (D/A)).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NGHI H. LY whose telephone number is (571)272-7911. The examiner can normally be reached on 9:30am-8:00pm Monday-Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost can be reached on (571) 272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nghi H. Ly

/Nghi H. Ly/
Primary Examiner, Art Unit 2617